

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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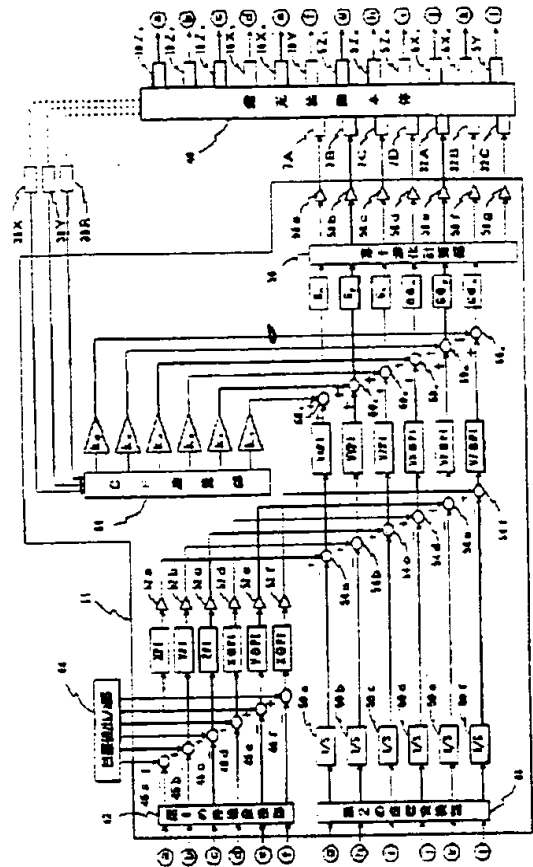
APPLICATION DATE : 07-06-96  
APPLICATION NUMBER : 08168367

APPLICANT : NIKON CORP;

INVENTOR : MORI FUTOSHI;

INT.CL. : H01L 21/027

TITLE : VIBRATION SUPPRESSOR AND ALIGNER



ABSTRACT : PROBLEM TO BE SOLVED: To enhance the suppression effect of disturbance vibration without shaking the apparatus body through mechanical resonance.

SOLUTION: When an apparatus body 40 is vibrated due to movement of a stage, the vibration is detected by an acceleration sensor 5 and the displacement of the body 40 is detected by a displacement sensor 10. Furthermore, moving position of the stage is measured by interferometers 30x, 30Y, 30R. In order to prevent the apparatus body from being shaken by a reaction to the acceleration of stage during acceleration/deceleration of the stage, a vibration compensation system feeds forward a counter force command value, i.e., a force reverse to the reaction, containing no mechanical resonance frequency component of the apparatus body to a vibration control system. The vibration control system controls driving of actuators 7A-7D, 32A-32C to suppress vibration of a vibration suppressing table based on an output from the displacement, an output from the vibration sensor and a command value inputted by feed forward.

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